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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/038,745	01/02/2002	Robert Jackson	FOC1100-1	2978

44654 7590 07/13/2005

SPRINKLE IP LAW GROUP  
1301 W. 25TH STREET  
SUITE 408  
AUSTIN, TX 78705

EXAMINER

NGUYEN, NGOC YEN M

ART UNIT PAPER NUMBER

1754

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/038,745

Applicant(s)

JACKSON, ROBERT

Examiner

Ngoc-Yen M. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 March 2005.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 32-39 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-8 and 32-39 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

Claims 1-8, 32-39 are objected to because of the following informalities: in the claims, "sodium *fluorine* trap" should be changed to "sodium *fluoride* trap". Appropriate correction is required.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8, 32-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Margrave et al (US 2002/011,513) in view of Coneney (3,731,495).

Margrave discloses a process for preparing single wall carbon nanotubes having substituents by reacting single wall carbon nanotubes with fluorine gas (note claim 10). The apparatus for carrying out such reaction is considered as the claimed fabrication tool. Margrave further discloses that elemental fluorine was used as the fluorination agent. HF, being the major impurity in the fluorine, was removed by passing it through HF trap containing sodium fluoride pellets (note paragraph [0106]).

For the auxiliary equipment or manifold arrangement to support the operation of the traps, it would have been obvious to one of ordinary skill in the art to select

appropriate auxiliary equipment or manifold arrangement to obtain the desired purification of the gas by passing it through the trap.

The difference is Margrave does not disclose that there are two traps, which are arranged in parallel.

Coveney '495 discloses an apparatus for air separation, in which multiple adsorbent traps are used. These traps are arranged so that one is used for impurity adsorption and one is simultaneously regenerated (note claim 18).

It would have been obvious to one of ordinary skill in the art to arrange multiple sodium fluoride traps in parallel for the invention of Margrave, as suggested by Coveney '495 because by doing so, one trap can be used to remove the HF impurity while the other can be regenerated and this would allow the removing step to be carried out continuously without interruption for regeneration step.

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

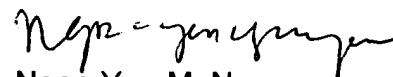
The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc-Yen M. Nguyen whose telephone number is (571) 272-1356. The examiner is currently on Part time schedule.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Stan Silverman can be reached on (571) 272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed (571) 272-1700.



Ngoc-Yen M. Nguyen  
Primary Examiner  
Art Unit 1754

nmn  
July 8, 2005